



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

## ZOOLOGY.

**Web-Spinning Spiders.**—The origin and evolution of web-spinning in Spiders is given by Mr. R. L. Pocock in a recent number of *Nature*. His theory may be briefly outlined as follows :

Granting the inheritance of silk-glands from an ancestor, the first step in the formation of web-spinning was the formation of the cocoon for the protection of the eggs. This is characteristic of all spiders. The next step would be to extend this protection about herself and the retreat in which the mother had sought refuge while watching over the incipient brood. An aperture would probably be left for ingress and egress, and so arises a rudimentary form of the tubular nest or web which may or may not become a permanent abode for the mother after the dispersal of the young. That this is the second step in the evolution of web-spinning seems supported by the fact that, with the exception of the cocoon, it is the most constant feature in the spinning industry of spiders. At this point there are two developments. Along one is a gradual ascent in complexity until a culmination is reached in the trap-door nest of the wolf-spiders (*Lycosidæ*) and the bird-spiders (*Aviculariidæ*) ; while the other leads to the webs which function as snares, of which the web of the *Epeira* probably represents the highest type.

From a tunnel-weaver like the *Drassidæ* which spins a temporary retreat for its breeding season, there are gradations to the web spun by the common house spider, *Tegenaria*, as an adjunct to its tubular retreat, and thence to the highly specialized orb-weaving of an *Epeir*, by way of the *Nephilengys*, a tropical genus, whose net shows a scanty mesh-work of lines arranged radially and concentrically with respect to the mouth of the funnel.

It would seem, according to the author, that the primary influence in guiding the evolution of the architecture of the tunnel-making species has been the necessity for the preservation of life and the avoidance of enemies ; while the web has resulted from a struggle for food. (*Nature*, March, 1895.)

**Fishes of the Northwest.**—During the summer of 1892, Mr. C. H. Eigenmann obtained a series of collections of the fishes of western Canada and the northwestern United States. The collections were made at 25 different places and include material for a comparison of

the fish-faunas of the streams flowing into Hudson Bay and into the Gulf of Mexico on the Atlantic slope, and into Puget Sound and into the Columbia River on the Pacific slope.

Mr. Eigenmann has worked out the relations that these different river faunæ bear to each other by an elaborate system of comparison, and finds that 6 of the 65 species are found on both the east and west slope of the continent. Of 42 species found in the Winnipeg system 8 are found in the Saskatchewan, and not in the Red River of the North; 16 found in the Red River of the North were not found in the Saskatchewan; 13 of 17 species taken in the Missouri are found in the Saskatchewan. The species of the Saskatchewan, with the exception of the new ones, are all found in the Mississippi basin. 11 Families of the Mississippi basin have not yet been found in the Saskatchewan basin. Only one variety was found in the Fraser that was not found also in the Columbia.

Sixty-five species were obtained, of which 20 per cent. were new to science. They belong to 14 families and 37 genera.

The notable additions to the knowledge of the North American fish-fauna made by these explorations is shown in the following summary of the results of the author's work.

1. A species of *Pantosteus* (*P. columbianus* = *P. jordanii* of the Missouri) discovered on the Pacific slope.

2. *Noturus flavus* found at the base of the Rockies at Craig, Mont.

3. Four new species of *Notropis* added to the East Canadian fauna.

4. Two new species of *Agosia* added to the Pacific fauna.

5. A new species of white-fish (*Coregonus coulterii*) discovered in the Rocky Mountain streams of a restricted region in British Columbia.

6. The family of Percopsidæ found to have a representative on the Pacific slope in the new genus *Columbia*.

7. Several species of *Etheostoma* found in Canada, among them two new species.

8. One new *Cottus* (*C. onychus*) added to the fauna of the Saskatchewan.

9. A new *Cottus* (*C. philonips*) discovered at Field, B. C.

10. A species of *Lota* reported from both the Columbia and the Fraser.

11. It was discovered that the fins of the fishes of the Pacific slope vary from the fins of the fishes of the Atlantic slope in definite directions.

12. The extent of variation between the species of any given family of fishes on the Pacific coast was found to be greater than that between the species of the same family on the Atlantic slope.

13. *Richardsonius* was proved to be a subgenus of *Leuciscus*. Its species were found to vary directly with the locality. (Art. II, Bull. U. S. Fish Commission for 1894.)

**Queer Misfortunes of Birds.**—I have noticed in a N. Y. paper, an account of a strange misfortune that happened to an English sparrow at the building of the Edison laboratory, Orange, N. J. The bird became entangled in a twine used in the construction of its nest, and met its death by hanging. This has reminded me of a similar incident that occurred to a bird last summer, near this place, Bowling Green, Ky. It was a common, or crow blackbird, and was seen hanging by the neck, from the limb of a tall tree overhanging the road. Whether in flying with a long grass or string it became entangled with it, or in what way it got caught in the noose and met its death is a matter of conjecture. A queer incident of a woodpecker has come under my notice. The bird, a hairy woodpecker, was seen on a tree trunk and though a stone was thrown towards it to see it fly, it remained in the same position. On going nearer it was found that the bill had been driven into the tree with such force that the bird could not extricate it, and had hung there, meeting a miserable death.

I have heard from a friend of an interesting life history of a mocking bird. It was quite a young bird when purchased from a negro bird-catcher, and it was soon discovered to have sore feet. These were swollen twice the natural size, and though efforts were made to relieve this, it was only after it had lost several of its toes,—two front toes on one foot and one on the other,—that the feet were finally healed. After this it moulted, losing about all its feathers at one time. Its eyes then became inflamed, and the eye-ball like a drop of water, finally closed and the bird became totally blind. In getting its food it would stand at one side of the cage and follow the wires till it reached the food, it would then follow the side of the cage till it reached the water. It soon learned, however, to gauge distances and would fly to the perch without fail. It was a pitiable object, but strange to say, this poor maimed bird, lame and blind, developed into one of the finest of singers!

A caged mocking bird here, in moulting, has the new wing-feathers, the primaries at least, reversed; the upper surface turned in or partially so. The owner of the bird has been advised to pull out these feathers, that they would then grow in straight. This would seem rather a severe measure. It would be interesting to know whether this is an accident only to caged birds, or if it ever occurs to birds in a state of Nature.—  
SADIE F. PRICE.

**The Cotton-Tail Rabbit.**—The name *Lepus sylvaticus* proposed by Dr. Bachman in 1837, for the common gray rabbit of the United States, has hitherto been restricted to the eastern region from northern Florida to Canada. A recent investigation of the subject by Mr. Outram Bangs reveals that this region is occupied by two distinct subspecies, for the northern one of which he proposes the name *Lepus sylvaticus transitionalis*, thus restricting the true *L. sylvaticus* to the Carolinian life area. In the same paper the author in referring to the geographical distribution of the northern hare (*Lepus americanus* Erxl.), in the east, points out that the common cotton-tail (*L. sylvaticus*) is continually pushing its way farther to the north and replacing the northern hare. The latter is rare in Massachusetts, has almost wholly disappeared from many parts of New Hampshire, but is still abundant in Maine, New Brunswick and Nova Scotia. Mr. Bangs accounts for the spread of the cotton-tail to the north as a consequence of the destruction of the great coniferous forests, which are replaced by a scrubby second growth of shrubs. The hare goes with the coniferous forests and the cotton-tail comes in with the second growth. (Proceeds. Boston Soc. Nat. Hist. Vol. XXVI, 1895.)

**Zoological News, Mollusca.**—Mrs. M. B. Williamson reports the successful planting of Eastern oysters in the bays of Los Angeles Co., California. The oysters of Alamitos Bay are as large as those of the same age raised in the East. No star-fish or carnivorous shell fish have been detected in the oyster beds. It is possible that in stocking the beds with eastern oysters may result in planting the fry of other eastern molluscs as well, since *Mya arenaria* L. and *Urosalpinx cinerea* are now propagating in San Francisco Bay as a result of the introduction of Eastern oysters in those waters. (Ann. Pub. Hist. Soc. Southern Cal., 1894.)

**Crustacea.**—Four new genera of crabs, represented by a number of species, are reported by Mr. J. E. Benedict from the collections made from dredgings in the North Pacific Ocean and Bering Sea, by the Streamer Albatross. Several new species of *Lithodes* are included in the same collections. A number of young *Lithodes*, referred by the author to *L. camtschaticus* agree with Brandt's description of *L. spinosissimus*, which, according to the author, was undoubtedly founded upon a young specimen. (Proceeds. U. S. Natl. Mus., 1894.)

**Agnatha.**—Mr. Howard Ayres does not agree with the commonly accepted theory that *Bdellostoma dombeyi* Lac. is a parastic, degenerate

vertebrate. He asserts that its sense organs represent primitive conditions, showing no anatomical characters that justify a conclusion that they are degraded from a more perfect ancestral condition. A series of experiments has demonstrated also that this vertebrate does not depend upon its internal ears for the equilibration of its body. (Biol. Lectures at Woods Holl, 1894.)

**Pisces.**—In the revision of the subfamily Sebastinæ of the Pacific coast of America, Messrs. Eigenmann and Beeson have adopted a classification based upon the relation of the parietals to the supra-occipital as a primary character, and the constant presence or absence of certain cranial spines. Under the system 11 genera are defined, to which are referred 52 species. A valuable addition to the paper is a historical list of the species and their present equivalents. (Proceeds. U. S. Natl. Mus. Vol. XVII, 1894.)

**Reptilia.**—Dr. G. Baur places *Anniella* in a separate family, the *Anniellidæ*, close to *Anguidæ*, and has its closest relative in *Anguis* itself. In fact, the *Anniellidæ* are in the same relations to the *Anguidæ*, as are the *Acontiidæ* to the *Scincidæ*. (Proceeds. U. S. Natl. Mus. Vol. XVII, 1894.)

From a study of the herpetological fauna of the islands of Palawan and Balabac Dr. Boulenger concludes that these islands should be regarded as belonging to the same subregion as Borneo. This conclusion was reached also by Mr. A. Everett from a study of the mammals and birds of that district. (Ann. Mag. Nat. Hist. Ang., 1894.)

**Aves.**—Mr. Robert Ridgway reports 6 more new birds in the Abbott collection from Aldabra, Assumption and Gloriosa Islands. This makes in all 14 new forms from these islands. (Proceeds. U. S. Natl. Mus., Vol. XVII.)

**Mammalia.**—An Clivedale terrier bitch belonging to a coachman in my brother's employ gave birth to seven puppies, sired by a thorough bred Irish terrier; two of the puppies were born with the tails, just half as long as those of the other five. As for generations the ancestors have had their tails artificially modified, it seems as though this was a genuine case of natural following of artificial type. As the two puppies happen to be male and female it would be interesting to see if the type could be continued.—ALLERTON S. CUSHMAN.